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REMARKS

The present filing is responsive to the office action.

Summary of the Response

Claim 7 has been amended. Claims 1-20 remain pending in this application.

Reexamination and reconsideration of the present application as amended are respectfully requested.

Prior Restriction

In the present action, the Examiner did not rebut Applicant's arguments traversing the earlier restriction requirements. Instead, the Examiner sweepingly and conclusively asserted that Applicant's arguments were not persuasive, without pointing out specific reasons, other than certain statements that added further confusion to the issue, and further demonstrated the absence of a proper basis to restrict the claims.

Specifically, the Examiner stated in the present action:

"The traversal is on the ground(s) that the Applicant argues they do not understand the difference between what a combination and subcombination, and when a restriction is proper. This is not found persuasive because MPEP Chapter 800 can direct applicants to when a restriction is proper. In the instant case, the interface mechanism of Claim 19 is not the exact same interface mechanism as in Claim 1 (the particulars of the interface mechanism are not the same in both Claims 1 and 19). Furthermore, the interface mechanism as claimed in Claims 1-18, has a separate utility and is not novel to the system as in Claims 19-20."

Applicant takes exception to Examiner's statements. Applicant nowhere in the previous response to the restriction requirement argued that it did "not understand the difference between what a combination and subcombination, and when a restriction is proper". Instead, Applicant

stated that it did not understand the Examiner's reasoning for the restriction, especially since the combination claimed in claim 19 does require the interface mechanism, and in fact the specific interface mechanism recited in claim 1. (See page 7 of Applicant's earlier response: "The Examiner asserted that Inventions II and I are related as combination and subcombination. In particular, the combination as claimed does not require the particulars of the subcombination as claimed because the combination as claimed does not require the interface mechanism.

Applicant does not understand the reasoning, since the combination claimed in claim 19 does require the interface mechanism, and in fact the specific interface mechanism recited in claim 1.)

Further, the burden is not whether Applicant knows when a restriction is proper. From the perspective of examination of the present application, it is the Examiner's responsibility and burden to make sure a restriction, when required, is properly identified and adequately supported by reasoning. When Applicant takes exception to the Examiner's restriction, Applicant only needs to point out the reason why the restriction is improper. It is not the Applicant's responsibility to set forth proper restriction requirements. In this case, as Applicant noted in detail in the earlier response, the Examiner failed to specifically set forth appropriate reasons to support restriction, and the Examiner has now failed to address Applicant's arguments traversing the restriction. Simply directing Application to MPEP Chapter 800 does not address Applicant's arguments, which actually referred to specific relevant sections of MPEP Chapter 800 (see, pages 9 and 10 of Applicant's earlier response). Applicant respectfully direct the Examiner to the relevant sections of MPEP Chapter 800, to cite specific sections and provide specific reasonings to support application of those cited sections for the restriction.

In the earlier response, Applicant set forth clear basis the relationship of the recited subcombination (claim 1) and combination (claim 19). In the present action, the Examiner stated

that the interface mechanism of claim 19 is not the exact same interface mechanism as in claim 1. Applicant notes the variation in language in the claims under comparison is the result of claim drafting to make the claims more readable. As Applicant detailed in the prior response, the combination claimed in claim 19 does require the interface mechanism, and in fact the specific interface mechanism recited in claim 1. The Examiner is again directed to the comparison of claims 1 and 19 below.

Claim 1 recites:

"An interface mechanism for interfacing at least an associated component of a capillary cartridge to at least an external component that makes available a support element required by a bio-analytical process for a bio-sample, comprising:
a support structure supporting the cartridge in relation to the external component;
at least one biasing device supported by the support structure, the biasing device supporting and biasing the external component against the associated component of the capillary cartridge, thereby making the support element available to the cartridge to conduct the bio-analytical process."

Claim 19 recites:

"A bio-analytical system for conducting a bio-analytical process for a bio-sample in a capillary cartridge, comprising:
a support for a sample;
an interface mechanism for interfacing the capillary cartridge to a support element required by the bio-analytical process, comprising:
at least an external component that makes available the support element required by the bio-analytical process;
a support structure supporting the cartridge in relation to the external component and the sample;
at least one biasing device supported by the support structure, the biasing device supporting and biasing the external component against an associated component of the capillary cartridge, thereby making the support element available to the cartridge to conduct the bio-analytical process; and
a controller controlling the bio-analytical process in the capillary cartridge, including controlling operation of the interfacing mechanism."

Based on the above comparison of claims 1 and 19, it is abundantly clear that the claimed combination of claim 19 does require the particulars of the claimed subcombination of claim 1. To find Applicant's argument not persuasive, the Examiner needs to do more than a conclusory statement, but instead specifically identify the flaws in Applicant's arguments.

Further, in the earlier response, Applicant pointed out the flawed reasoning made by the Examiner: "The interface mechanism, the subcombination has separate utility such as head for connecting pins for spotting DNA to an array". Applicant respectfully requested the Examiner to clarify this conclusion, since MPEP 806.05(e) provides "[i]f applicant proves or provides an argument, supported by facts, that the utility suggested by the examiner cannot be accomplished, the burden shifts to the examiner to document a viable separate utility or withdraw the requirement." The Examiner did not clarify his statement in the present action. Accordingly, Applicant respectfully submits for the record that the Examiner's earlier statement was inappropriate, and it has been overcome by Applicant's arguments.

Both requirements under MPEP 806.05(c) must be satisfied to support a restriction (i.e., MPEP 806.05(c) provides: "The inventions are distinct if it can be shown that a combination as claimed: (A) does not require the particulars of the subcombination as claimed for patentability (to show novelty and unobviousness), and (B) the subcombination can be shown to have utility either by itself or in another materially different combination. When these factors cannot be shown, such inventions are not distinct." Accordingly, even if the subcombination can be shown to have a different utility, given that the first condition under MPEP 806.05(c) has not been met, the restriction requirement should be withdrawn.

In the present action, the Examiner mentioned for the first time that the interface mechanism as claimed in Claims 1-18 "is not novel to the system" as in claims 19-20. Applicant

again directs the Examiner to the comparison of claims 1 and 19 above. Earlier presented claim 19 recites essentially the interface mechanism of claim 1. Claim 19 as previously presented does require the particulars of the subcombination of claim 1 for patentability. The Examiner needs to point out specifically why claim 19 does not require the structure recited in claim 1 for patentability, or withdraw the restriction.

In view of all the foregoing, Applicant respectfully requests the Examiner to withdraw the finality of the restriction requirement as it is improper, and rejoin claims 19-20 in this case for further examination.

Claim Rejections Under 35 USC 102(b)

Claims 1-18 are rejected under 35 USC 102(b) as being anticipated by Dovichi (US 5415841). This rejection is respectfully traversed.

The recited invention is directed to an interface mechanism in a bio-separation instrument which provides a quick connect interface to an interchangeable multi-channel cartridge. By nature of an interchangeable cartridge, it is removable and replaceable in relation to the interface mechanism. One aspect of the present invention provides an interface mechanism (i.e., a quick connection) that precisely positions the interchangeable cartridge in relation to the support elements (e.g., electrical power such as high-voltage, gas pressure, incident radiation and detection optics) provided by the supporting instrument, and makes automated, reliable and secured alignments and connections between various components in the cartridge and the support elements in the instrument. Such alignments and connections are reliably implemented, in a reliable automated sequence, after the interchangeable cartridge had been securely received by the interface mechanism. In another aspect of the present invention, the interface mechanism

comprises pneumatically or electro-mechanically driven actuators for engaging structures on the cartridge, to securely connect at least one of gas pressure, high voltage, emission detection optics, and excitation radiation optics. In one embodiment, the pneumatically driven actuators comprise gas driven pistons. After the interchangeable cartridge has been securely received by the interface mechanism, the connection sequence is initiated. In one embodiment, the connection sequence is initiated by a user. Alternatively, the connection sequence may be initiated automatically in response to a secured reception of the removable cartridge to the interface mechanism. A disconnection sequence is provided to disconnect the support elements from the cartridge, allowing the cartridge to be safely removed from the instrument. In a further aspect of the present invention, the interface provides separate high voltage and optical connections for each separation channel in the cartridge, thus providing channel-to-channel isolation from cross talk both electrically and optically.

Dovich discloses at most a laboratory setup of a continuous biochemical reactor including various capillary sections not held by a capillary cartridge. There is no disclosure or hint of how its system can be implemented to work with an interchangeable capillary cartridge, in the context of the present application. The drawings and disclosure in the Dovich do not provide details of the connection between various components. In the absence of specific disclosure, the only reasonable conclusion is that the various components are connected in a way that would not enable a quick connect interface for an interchangeable cartridge in the context of the present application. Specifically, the connections of the various components in Dovich cannot be said to be made as a result of "biasing" between components, given that Dovich is not concerned with the making of a quick and reliable connection to an interchangeable cartridge

structure by biasing the external components to the cartridge when supported by the interface mechanism, as is in the case of the present invention.

In particular, there is no disclosure in Dovichi: "An interface mechanism for interfacing at least an associated component of a capillary cartridge to at least an external component that makes available a support element required by a bio-analytical process for a bio-sample, comprising: a support structure supporting the cartridge in relation to the external component; at least one biasing device supported by the support structure, the biasing device supporting and biasing the external component against the associated component of the capillary cartridge, thereby making the support element available to the cartridge to conduct the bio-analytical process", as recited in independent claim 1. The Examiner did not point out the structure in Dovichi that corresponds to a capillary cartridge, and the corresponding structures that provide the recited biasing of external components to the capillary cartridge. The Examiner referred to items 14, 22, 24 and 26 in Fig. 1 of Dovichi, but they are respectively capillary 14, valve 22, line 24 and vial 26. None of these items referenced by the Examiner correspond to a capillary cartridge or a biasing structure. Applicant respectfully requests the Examiner to specifically identify the corresponding structures in Dovichi, or withdraw the anticipation rejection if such corresponding structure is missing in Dovichi.

The dependent claims are likewise not anticipated by Dovichi for at least the same reasons noted above. The dependent claims add further structural limitations that further distinguish from Dovichi. For example, claim 2 requires: "the biasing device comprises a compliant member supporting and biasing the external component against the associated component of the capillary cartridge when the capillary cartridge is supported by the support

structure." As noted above, items 22, 24 and 26 in Dovichi referenced by the Examiner do not correspond to capillary cartridge or a biasing structure, or a compliant member.

Claim 4 requires "the biasing device comprises an actuator operatively coupled to the external component." Item 22 in Dovichi referenced by the Examiner is a valve. Whether or not the Dovichi valve may include an actuator, it is clearly not a biasing device in the context of the recited invention.

Claim 7 as amended makes clear that the capillary cartridge is interchangeable and removably supported by the support structure, and wherein the biasing device is structured to removably bias the external component against the associated component of the capillary cartridge to provide a quick connection." Dovichi clearly does not disclose the recited interchangeable cartridge and removably biasing.

Claim 9 recites: "the capillary cartridge comprises multiple separation channels" Dovichi does not disclose a capillary cartridge, but only capillary sections schematically represented in the figures.

Claim 16 recites "the support structure comprises a location device and an actuator that biases the location device against the capillary cartridge to positively position the capillary cartridge in relation to the external component." Dovichi does not disclose a capillary cartridge, much less a location device and an actuator that bias the location device against the capillary cartridge.

Claim 17 recites "the interface mechanism further comprises a controller controlling operation of the biasing device and the location device, wherein the controller is configured to activate the location device to positively position the capillary cartridge prior to activating the biasing device to bias the external device against the associated component of the capillary

cartridge." The Examiner took the position that the personal computer stated at column 7, lines 60-64 would be able to perform the recited functions. Applicant respectfully disagrees. The personal computer referenced in Dovichi merely collects and process data. There is no indication that the personal computer can and should be configured to control operation of mechanical components including the recited biasing device, location device, and positioning of the capillary cartridge, etc. As noted above, Dovichi is not directed to a system that provides a quick connect to an interchangeable capillary cartridge. Hence, one cannot reasonably expect Dovichi, and indeed cannot find any disclosure in Dovichi, to be directed to the control of any biasing operation.

Accordingly, independent claim 1 and all dependent claims are not anticipated by Dovichi. Should the Examiner maintain the rejection, the Examiner must specifically identify the structures in Dovichi which are deemed to correspond to the structures recited in the claims of the present application. In the absence of corresponding structures in Dovichi, the rejection must be withdrawn.

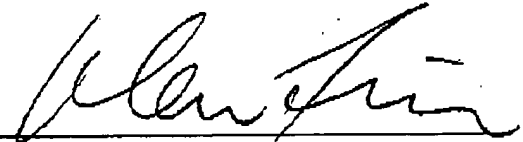
CONCLUSION

The Examiner is invited to call the undersigned representative to discuss any outstanding issues that may not have been adequately addressed in this response.

The Assistant Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this transmittal and associated documents, or to credit any overpayment to **Deposit Account No. 501288** referencing the attorney docket number of this application.

Respectfully submitted,

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